



Reduction levers strategy and tips of reduction per cluster

Humanitarian Carbon Calculator (HCC)

Aggregation tool

Written by:

ICRC and Ecoact with the support of the organizations that have pilot the Humanitarian Carbon Calculator and Globalt Fokus

December 2022

Tools and materials:

**Humanitarian Carbon Calculator
Aggregation tool
User Manual
Methodological Guide
Carbon accounting videos (CHORD)
Climate Report “how to guide for NGOs to measure and reduce GHG emissions” (Globalt Fokus)**

Table

What after the humanitarian carbon calculator?	3
Introduction to a reduction levers strategy by the Danish Refugee Council	3
Tips to reduce carbon emissions per cluster.....	7
Premises	7
IT - printing	10
Business travel	11
Employee / Volunteers Commuting	11
Order management	12
Transportation and distribution	13
Organization's fleet	14
Waste	16
Procurement	18

What after the humanitarian carbon calculator?

Based on the results of your carbon calculation, each organisation should build a customised decarbonisation roadmap.

The following list of tips and examples is not exhaustive, and it can inspire measures that could be included in that plan of action. However, each organisation should understand first which areas of the organisation contribute with more emissions and assess in which areas the organisation may have more margin of manoeuvre (levers) combining quick fixes with longer term investments that can render bigger impact (maximise carbon reductions).

Link for the Humanitarian Carbon Calculator and the aggregation tools:

Introduction to a reduction levers strategy

This section gives a guideline on the main steps from reporting your carbon footprint to reduce your emissions and gives a non-exhaustive list of reduction levers. This section was sourced from the **Climate Responsibility Project** of the **Globalt Fokus**, for more information, please go to the [to this link](#)

Once the CO₂e-baseline has been established you can now use the insights to identify carbon reduction initiatives and set targets. Here is a 4-step process recommendation by DRC.

Note, this is an iterative rather than a linear process:

1

Anchor the baseline – Anchor the baseline with leaders across departments.

Use this step to ensure organizational buy-in and co-create and get ideas about potential reduction initiatives. Some examples of ways to engage stakeholders are:

- In the beginning of the data collection process, communicate what the process is about and what some preliminary CO₂e-baseline results are
- During data collection and calculations, have regular meetings in relevant fora to present the results of the baseline and discuss how to go from a data collection exercise to a reduction exercise
- Once the baseline is done, present the full results and clear next steps for the whole organization

2

Develop CO₂e-reduction lever catalogue – The figure 9, will give you examples of action levers for each category. To structurally approach the development of a reduction lever catalogue, you can use the insights from your CO₂e-baseline to figure out what your 'Carbon Reduction Hierarchy' looks like. A Carbon Reduction Hierarchy is a categorization of emissions into:

- Emissions that can be cut completely,
- Emissions that can be reduced – e.g., improving virtual meeting facilities can reduce the need for in-person meetings, and hence reduce business travel and
- Emissions that are unavoidable that could be offset (not mandatory).

Reduction levers are typically tied up to a specific category.

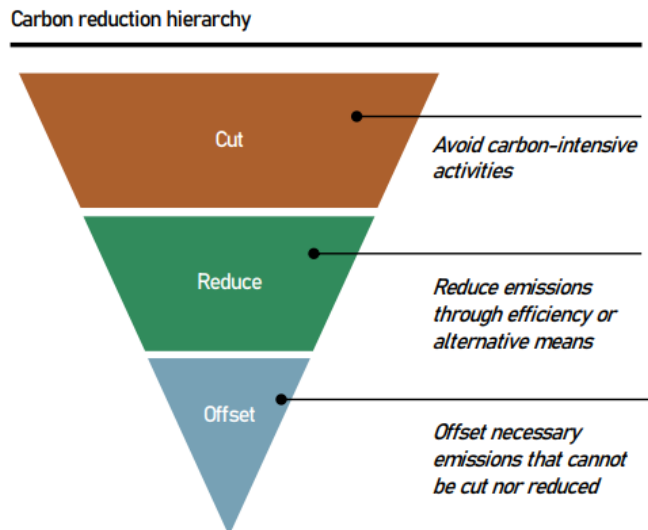
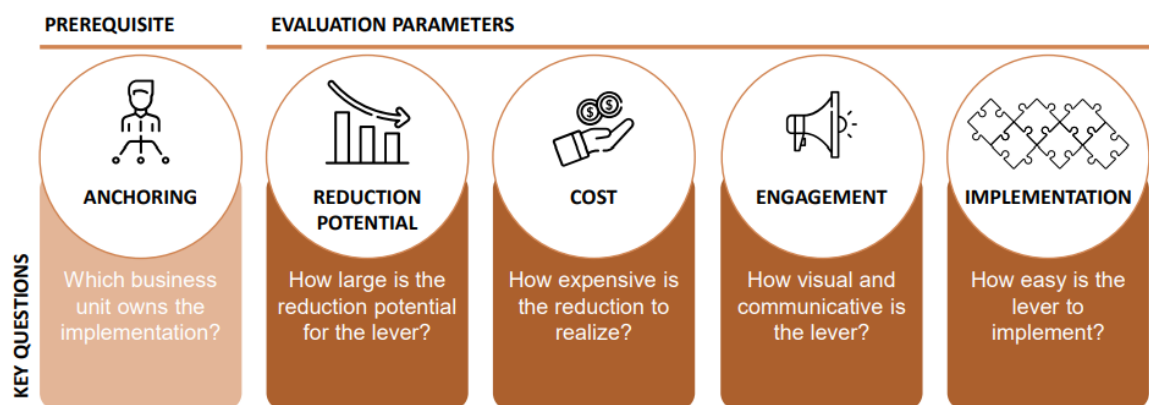


Figure 1. Carbon reduction hierarchy

Once the long list is made, you can then assess the initiatives. While you can use the CO₂e-baseline to identify where the biggest emissions, and hence where the biggest carbon reduction potentials are, we recommend that you balance impact with engagement and sphere of influence – descriptions of these are provided below.

Figure 2. Prerequisite and evaluation parameters by DRC



Set targets:

Target setting can be approached bottom-up or top-down:

- **Top-down approach:** You start by simply setting targets in terms of how much to reduce emissions and by when – e.g., a target to be carbon neutral by 2030 or alignment of targets with the Science-Based Targets initiative. Finding out how to reach the targets comes later. In private organizations, this is the most common way to go about target setting, and while it can result in ambitious and meaningful targets that put pressure on the organization, it can be difficult to communicate how you will realistically achieve the target and you can end up relying too much on offsetting.
- **Bottom-up approach:** You start identifying and prioritizing all relevant reduction levers, preferably in collaboration with the organization. You then find out what the reduction potential is for the prioritized reduction levers and set your target based on the combined potential of all initiatives
Since the top-down approach risks leaving a gap in terms of how to achieve the target, whereas bottom-up approach risks not being ambitious enough, the approaches should

ideally be combined to get the best of both worlds – that is, do an iterative process between the top-down and bottom-up approach. This can however be very time consuming.



Develop a plan for implementing and transforming the program: to get more insight please refers to the Climate Responsibility Project

Figure 3. Action levers examples by scopes and categories

Scope/category	Reduction lever	Description
Scope 1	Electrify the organisation fleet	Lease/purchase only EVs and establish an electric vehicle charger point at or near the office, to make use to electric based driving more convenient
	Company car sharing	
	Company bike and repair services	
Scope 2	Increase energy effectivity	E.g. reduce consumption from light using LED light bulbs
	Intelligent office solutions	Install intelligent thermostats and other building automation solutions (light sensors in offices, automatic switch on/off functions)
	Reduce office sq meters	Reduce unnecessary space in office facilities to reduce electricity, heating and cooling usage
	Select efficient heating source	Change source of heat to district heating, onsite generator such as thermal solar collectors, or heat pumps
	PPA crowd sourcing	Replace non renewable energy with renewable energy such as hydro, solar or wind
Scope 3.1: Upstream purchased goods and services	Green procurement strategy	Select suppliers in key purchase areas such as cleaning, facility management, IT equipment, materials, emergency kits etc. based on green criteria
	Green canteen and lunch catering	Focus on minimize food waste from canteen solutions and reduce or eliminate meat consumption
	Policy for printing	Implement policies to reduce use of printing facilities in office locations and remove requirements for physical documentation
	Policy for repairs	Implement policies to incentivise repairs and reuse
Scope 3.2: Upstream capital goods	Green procurement strategy	Select suppliers in key purchase areas such as lunch, cleaning, facility management, IT equipment, materials, emergency kits etc. based on green criteria
Scope 3.3: Upstream fuel and energy related activities		
Scope 3.4: Upstream transportation and distribution	Reduce/eliminate use of air freight	Implement policies to reduce and restrict use of flight transport in logistics
	Green transport procurement strategy	Select logistics providers based on green criteria
Scope 3.5: Upstream waste generated in operations	Garbage sorting	Ensure garbage disposal with sorting options in offices and facilities
	Reduce water consumption	Implement water saving aerators in restroom taps, water effecient appliances
	Policy for single use products	Reduce unnecessary waste by reducing use of singe use products used in the field and in offices (e.g. recycled cups in offices, or reuse field kits, tents etc.)
	Recycle	Implement policies to recycle offices appliances and equipment
Scope 3.6: Upstream business travel	Policy for business travel	Implement policies to reduce and replace use of flight transport
	Green taxis	Use only EV taxi providers for transport
	Nudge public transport	E.g. Offer employees beneficial public transport subscriptions
	Improve virtual meeting facilities and home offices	Implement Teams/Skype and high quality wifi, to ease remote collaborations - also in home offices
Scope 3.7: Upstream employee commuting	Bicycle repair	Partner with bicycle repair providers
	Improve virtual meeting facilities	Implement Teams/Skype and high quality wifi, to ease remote collaborations

Scope 3.9: Downstream transportation and distribution	Partnerships with public transport	
	Partnerships with bike local bike renters	
Scope 3.10: Downstream processing of sold products		
Scope 3.11: Downstream use of sold products	Education in use	Best practice education on usage for electricity reduction
Scope 3.12: Downstream end-of-life treatment of sold products	Take-back programs	Take-back program with "disposal/recycling partners" and re-use of commissioned equipment and items used in the field
Scope 3.13: Downstream leased assets		
Scope 3.14: Downstream franchises		
Scope 3.15: Downstream investments		

Tips to reduce carbon emissions per cluster

Behavioural changes could be more important than technical change. Educate and create awareness in your own team, implement a greening group that can focus on quick wins across all the departments, etc. is quite important.




Premises

- Ensure generators are appropriately sized
 - In many cases generators could use 50% of the fuel that an organization uses. One of the main problems of the generators is that they are oversized therefore it has a consequence on the amount of fuel used. Finding the right size of a generator is not always easy and it should be reviewed by expert. For the generators that have been already installed, please add a sensor to control the power the generator generates and the power they consume. Having this information will be key for when the generator needs to be replaced
- Systematically implement sustainable design standards when constructing or renovating buildings & infrastructures (i.e. at the end of cluster an example on the new regional delegation green design strategy)
- Improve energy performance of existing premises buildings through relevant/feasible passive measures, including insulation, shading (with trees or pergolas), etc.
- Plant trees in front of the main walls where heat penetrates, as in the long term it will reduce the heat penetrating in the premises
- Conduct energy audits
- Undertake an energy and building isolation assessment before installing solar PV system.
- Systematically deploy technical energy efficiency measures in premises and residences
 - Mainstream the installation of connected energy sensors across all premises (there are also connected sensors for water consumption and other environmental aspects)
 - Educate staff and raise awareness; behavioural change can be more impactful than technical measures
 - Install light occupancy sensors in common areas which they can automatically switch off lights after 5 mins of no presence.
 - Install LED (light-emitting diode) lights. A cost benefit analysis shows huge saving at the end of the year when changing old light for led panels (usually they require an initial investment to replace existing bulbs, but it pays off after some time because of lower electrical consumption and longer life-span). Specially, avoid the use of halogen bulbs, which consume a lot of energy
 - Use natural lighting as much as possible
 - Install solar security lights where relevant, taking into account the fact that, as they are solar, and depending on the quality, the lights may only last some hours
 - At night, turn off the lights that are not needed
 - Define room temperature standards in premises (offices and residences)
 - Control the room temperature by installing programmable thermostats, to save money on your energy bill. Every 1-degree increase in the indoor temperature of a heated room can use up to 15% more energy. 10% for a cold room. Switch to hybrid inverter-type AC units
- Old AC units being replaced with new inverter
- Collect the water that drips from AC units which is very good for watering plants

- Ensure Heating, ventilation, and air conditioning (HVAC) systems are regularly maintained.
- Purchase energy efficient equipment for premises (offices and residences)
- Install solar water heaters
- Program the temperature of the water heaters around 60° degrees Celsius, which is hot enough to keep your water clean and safe and cold enough that your cylinder won't waste energy on keeping your water unnecessarily hot.
- Educate staff on appropriate usage of electrical equipment
 - Unplug equipment when not in use to stop ghost/phantom loads: electricity is sent to plugged-in appliances that draw power, even when they're turned off (think of the seldom-used desk lamp that remains plugged in, your cell phone charger, even your television – as they lie dormant, they're sucking electricity and costing you money). Install power strips (with a LED red light to visually know when it is on) to manually turned off to cut the electricity to multiple devices, instead of having to unplug everything one by one.
- Reduce fossil fuel produced electricity consumption (generators) by switching to renewable sources of energy
- Ensure generators are appropriately sized
- Install solar charging spots for electric cars that staff can use to charge their own cars
- Install solar water pumps
- Install dual flush toilets, to reduce water consumption and operating time of pumps
- Install flow aerators, to reduce water consumption and operating time of pumps
- Use recycled paper for printing and other uses (more info about printing below under IT) .
- Gardening services, include action plans to use more native species, pollinated species, etc.
- Reuse furniture
- Identify local waste suppliers that manage the waste properly before starting with sorting and awareness campaign.
- Ban single use products
- Cafeteria greening practices:
 - Offer lunch options with high variety of vegetarian/vegan options
 - Lunch line should offer first salad, then vegetarian and at the end fish/meat options
 - Use only plant-based milk for coffee
 - Use fair trade coffee
 - Consider setting up a registration process for cafeteria to reduce food waste.
 - Sell the left-over food as take-out
 - Pack the food in environmentally friendly dishes
 - Stop single use dishes and cups
 - Use eco-friendly dishwashing detergent
 - Planning is key when purchasing the goods for the cafeteria as it could reduce the waste, reduce the number of deliveries, etc. Recycle the different types of waste as possible, depending on local recycling options.

- Find solution to reduce the consumption of plastic





Study – Nairobi New Delegation

NEW REGIONAL NAIROBI DELEGATION GREEN DESIGN STRATEGY

LEED Certification

- LEED (Leadership in Energy and Environmental Design) is the most widely used green building rating system in the world. Globally recognized certificate for sustainable and efficient design.
- 5% of project budget allocated to LEED Certification. Return of the additional investment within 3-5 years.
- LEED requirements to be applied during **design phase, construction phase and after handover by final users.**

Water Savings

- Water use reduction of 43% (1 014 m³ annually) through fixtures (low flow urinals, showers, kitchen faucets).
- Water use reduction of 29.6% through us treated water for flushing (550 m³ annually).
- Additional water supply from rainwater collection to be reused for flushing and irrigation approx. 347.83 m³ during 2 hour storm weather event.
- Capacity of waste water treatment plant is 28 350 litres per cycle.

Carbon Emission Reduction

- Projected reduction in carbon emissions of 125 Tonnes of CO₂ per annum purely attributed to energy use reduction and onsite renewable energy generation alone.

Energy Savings

- Energy use reduction compared to conventional building + 209389 Kwh/annum (37.7%) overall combined savings (optimized building orientation, insulated roof, improved natural lighting that reduces the use of artificial lighting, natural ventilation for most areas to reduce air-conditioning usage, energy efficient LED lighting with sensors, high efficiency fans, high EER HVAC units where ever used and to top it all onsite solar PV panels).
- Solar panels on the roof of SOK and NAI delegation will provide 30% of the electricity used in the delegation (150 Kwh peak).

NEW REGIONAL NAIROBI DELEGATION GREEN DESIGN STRATEGY

Pond

- Receives water from rainwater runoff and waste water treatment plant and subjects it to natural sedimentation for reuse (Capacity = 927 m³).
- The pond water is pumped to be reused in the toilets and irrigation.
- The pond also regulates the temperatures around the plot, keeping it cool, and helps sustain plants, birds and insects.

Bio-Ecosystem

- Building around trees approach: 50% (200 out of 400) of existing trees on site retained
- 40% (12,800 m²) of the site undisturbed during construction.
- Construction of a pond helps plant, bird and insect life.
- Top soil stored and reused after construction for landscaping.
- Plans to plant over 1000 trees and shrubs on site.

Building Orientation


- The buildings are oriented in an East-West direction to prevent direct sun hitting the longer side of the buildings.
- This reduces the thermal heat gain by approx 1% and regulates internal temperature, reducing the need for AC.

Waste water treatment Plant

- Rainwater runoff, stormwater and water from the toilets will be directed to the WWTP and the stormwater tank.
- 100% of the water is treated daily. Once treated the water will be pumped to the pond.

Improved work environment due to green approach

- Increase staff productivity
- Improved employee retention.
- Reduced absenteeism.



24/10/2022

Find below ICRC energy efficiency guidance:

- [Lighting guidance](#)
- [Air conditioning best practices](#)
- [Solar water heaters](#) (Anex)

9



IT - printing

- Choose laptops over desktops
- Used multifunctional printer instead personal printers
- Extend of the lifetime of your IT equipment as long as possible
- Buy equipment from distributors with take-back policies (to ensure the equipment can be sent back and properly re-used/recycled)
- Turn off any equipment that is not in use (including a second screen or a wireless mouse/keyboard)
- Use hibernation feature of computers and laptops
- Emails have an impact on CO₂ emissions:
 - Limit emissions related to the sending/reception of emails:
 - Send an email only when necessary, and make sure the message will be clearly understood by the recipient (avoiding the exchange of several follow-up emails for clarification purposes).
 - Include links to documents rather than sharing them as attachments; this can reduce the carbon footprint of your email by 92%
 - Clean your inbox and reduce the numbers of emails stored on servers
 - Here some infographics it in [English](#) and [French](#)
- Reduce the amount of paper consumed:
 - Print only when necessary
 - Set the default options of your printer to print on both sides of the paper and in grayscale (black and white) to reduce ink and paper usage
 - When writing a document, use pattern fills rather than colours to differentiate areas in a graphic (that way, if someone prints your document, they do not have to print it in colour)
 - Eliminate personal printers and move to shared printers and place them in well seeing locations (People who get dirty looks because they're printing too much are likely to self-regulate their usage over time)
 - Have people print their jobs at the printer itself. How often do people forget that they've printed something out and print it again? From 10 to 35 percent, according to industry reports. Using a virtual print queue, which means the person is explicitly at the printer before their job is printed, makes sure they're there to retrieve it.
 - Track individual use of printers. Use managed print services to monitor individual and department use of printers. Now, we're not going to cast any aspersions on people who might be helping manage outside activities, but printer use mysteriously goes down when individual use gets tracked.



Business travel

- Revise/develop a travel policy with clear criteria determining the necessity for travel
- Develop communication materials to raise awareness among staff about the carbon impact of travelling and the ways to reduce travel and inform staff about the organization's travel policy
- Work with your travel agency on the implementation of your travel policy
- Include the carbon emissions information in the travel booking system to make people aware of the impact of each trip
- Select the location for large meetings and/or trainings based on where the participants will be travelling from/to, in order to optimize the overall distance travelled
- Favour as the default selection the least carbon-intensive mode of travel or itinerary (e.g., train rather than airplane when available, direct flight rather than multiple flights with stop-overs).
- Develop internal incentive mechanisms to reduce travel (e.g., internal carbon tax on travel, extra days off for employees that demonstrate a carbon reduction¹)
- Improve the skills and technologies to facilitate remote work and meetings. Provide guidance on how to access virtual collaboration tools and who to reach out to for support.



Employee / Volunteers Commuting

- Give an allowance for people who don't come by car to the office but use public transport
- Give allowance to staff who cycle to work (for bike maintenance and repairs, helmet or even bicycle purchase) to encourage cycling
- Offer 1 week where a bicycle mechanic will come to do maintenance for free
- Offer some tools at the premises for the bicycle user to fix their bicycle if there is an issue
- Offer space in the office for those who want to take a shower after biking to work and space to leave their things
- Provide infrastructure for staff who cycle to work (adequate parking with a roof, lockers, showers, etc.)
- Develop communication materials to raise awareness among staff and encourage the use of public transport, cycling, walking or other soft mobility means. Inform staff about the support the organization provides to staff who choose sustainable transport (e.g., allowance, tools, repair workshops, dedicated infrastructure)
- Set up collective transport in places where staff cannot use public transport for safety / security reasons
- Introduce a teleworking policy to increase teleworking uptake by staff to reduce commute

¹ This could be a strategy to be tested in those organisations that have an internal HR travel policy by which staff is entitled to fly in business class in trips over certain number of travel hours. Most of the staff would not be willing to move from business class to economic class without an incentive: changing the travel policy would create a big internal resistance against 'more environmental sustainability' (instead of getting more internal 'green ambassadors' it would generate more 'green protesters'), but changing the HR compensation policy about annual leave could be a good starting point towards that change.



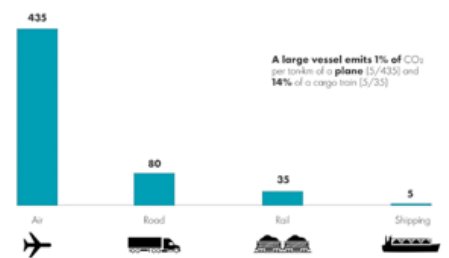
Order management

- Forecasting/planning

Importance of forecasting/planning for sustainability

Proper planning	Sustainable result
Reduced number of orders	<ul style="list-style-type: none"> - Less & more efficient work - Optimized transport - Number of paper, signatures, emails, etc. which is also a reduction on waste, GHG emissions, etc
More time to find proper supplier and item	<ul style="list-style-type: none"> - Market assessment (more sustainable suppliers, DDA questionnaire) - Avoiding traders & questionable private entities
Time for proper quality control	<ul style="list-style-type: none"> - Having the right quality item (quality we ask for) - Enough time to claim non-conformity
Reducing dead stock	<ul style="list-style-type: none"> - Reducing waste
Choosing the right mode of transport	<ul style="list-style-type: none"> - Prioritize sea-road shipments (less CO₂)

Emissions by Mode of Transport
g CO₂/tonkm^{1,2}





Transportation and distribution

- Mode of transport choice: the most important is to reduce the air transport and try to push as much as we can to send things by sea and road. Revising the main destinations where air is the most used mode of transport and see what other options can be used and what needs to be changed in order to make it happen (i.e., forecasting/planning , etc.)
 - Sending a full container is always better but if sending a full container means that the containers will be delayed and for that reason the material will be sent by air, then it is better to send the container even if it is not full. This will reduce the cost as well as the amount of CO₂ emissions
 - In ICRC a decision has been taken that in order to reduce air shipments containers can be sent with 75% of their cargo.
- Consolidate shipments: reduce the number of shipments by grouping products to be delivered in a single shipment to take place at regular intervals (e.g., every 2 weeks, 1 month, etc.)
- Optimize loading of containers, trucks, etc. It is always better to send full containers, except as mentioned above, if that means that to fill in a container it will take too long and due to the need to be delivered in the field then the shipment will be sent by air.
 - This is an important work that needs to be achieved together with procurement, order management and warehousing depending on where the goods are coming from. Procurement should inform on how many items of the most used items used by the organisation fits in one container therefore the order will be done accordingly.
- Reduce the number of warehouses the items will go through. This will reduce the cost, increase efficiency, etc. Direct shipment from suppliers, when feasible, should be put in place. Again, this is related to order management and needs to be achieved in collaboration with requesters, order management team, purchasing team, suppliers, etc.
- Include sustainability criteria in the selection process of transport companies: promote the carriers that use newer and better maintained fleet
- Having clear communication with your transport providers on the importance of reducing CO₂ emissions and ask them what measures they have taken in order to reduce them
- Optimise the supply network to reduce distance between storage locations and place of use/distribution
- As importation problem takes long in many countries (I.e. some countries it can take up to 6 months). Use electrical packing list from the international warehouse in order for the importation process to start earlier and save days. This can allow that items could be sent by sea instead by air which will reduce cost and CO₂



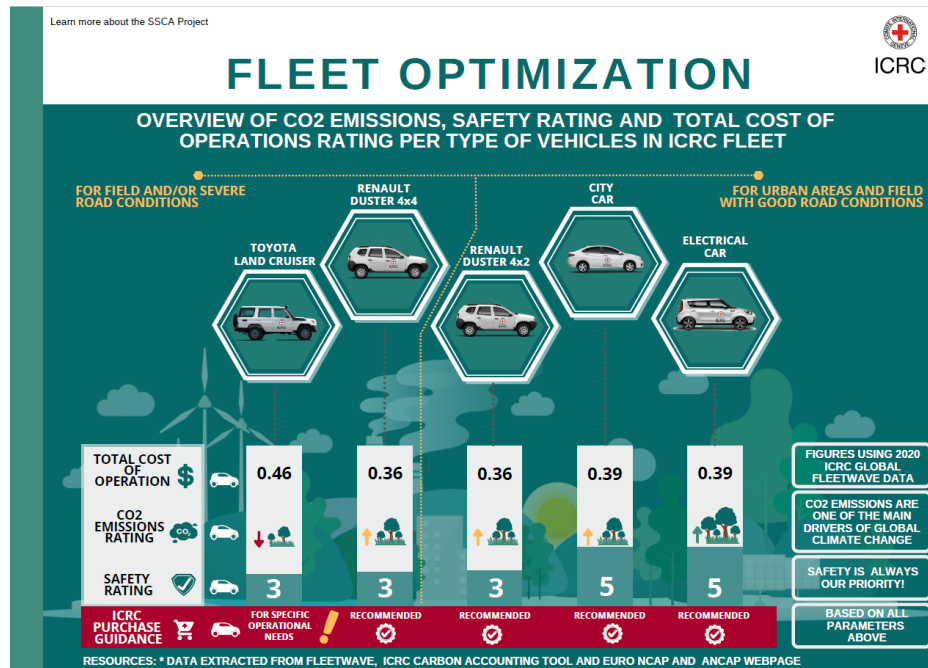
Organization's fleet

- Preventive maintenance -Following properly the maintenance schedule- will make your vehicle last longer and consume less fuel
- Analyse the number of cars and their use in order to reduce the fleet size:
 - Have a good carpooling system to consolidate trips as well as reduce the number of trips made, therefore the number of cars needed
 - Promote use of public transport when feasible
- Provide eco-driving training for staff and per default use of eco modes (sport mode disabled)
- The air pressure of the tyres has an impact on fuel consumption: lower than recommended by car manufacturer leads to extra friction
- To reduce the consumption of water: a) Use rainwater collections to clean the vehicles; b) Use pressurized car wash

Have the right car do the right job: you could already reduce the cost and the CO₂ emissions by having smaller cars in urban areas and field with good road conditions. Having electrical vehicles is also possible in some countries as studies undertaken by FleetForum has shown that most of the trips in the humanitarian sector are less than 100 kilometres:

- Reduce the number of vehicles should be our main focus and then, optimize what cannot be reduced
- Before buying the vehicle, think about how the car will be used, in which type of routes, etc. as this will help to understand what car you need
- Use electrical cars will reduce CO₂ emissions but also spare parts and waste as electrical vehicles use really small number of spare parts and don't use some of the more hazardous materials such as used oil
 - When choosing an electrical car, please think about charging devices, etc.
 - Also, the number of kilometres that the car will do should have an impact on the car chosen

- When choosing a new car, reduce the motor power of your car and get whatever is really needed and not more than needed (lighter vehicle) as this will reduce the fuel consumption
Train your team on sustainable fleet



- [Sustainable fleet training](#) A training course on fleet optimization and workshop waste management has been launched, for different audiences: management, administration, fleet team, transport users, etc. If you want to participate, please registered yourself for free on the IFRC platform and you will have access to the training



Waste

The majority of the waste produced by the cars used in the humanitarian sector is hazardous waste that can pollute the soil, water, etc. This waste should be properly managed

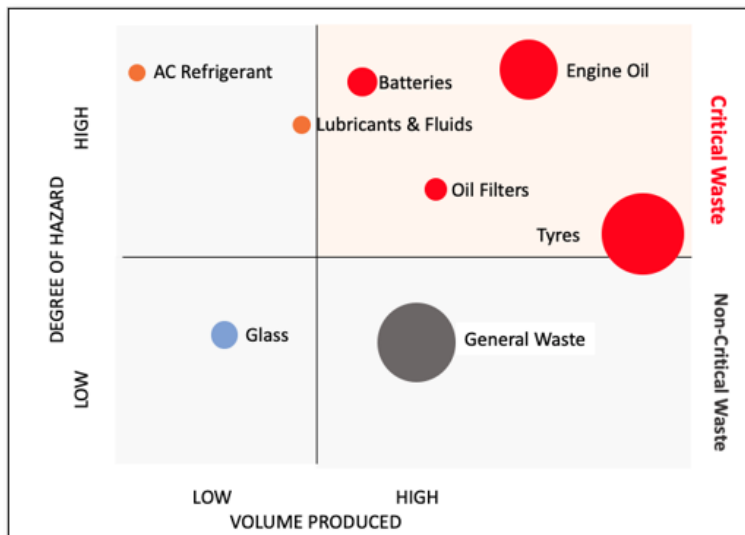


Image 1 - Identifying Critical Waste

- Collaborate with other organisations that have workshops in the country to create synergy and learning from each other. All the below steps should be done in collaboration with other organisations.
- As in many countries finding solutions for workshop waste management is complicated, search for options in neighbouring countries. Make sure that import/export permits for cross-bordering waste operations are in place and that waste is properly managed by 3rd-party companies. Start focusing on used oil which is the most critical waste
- When choosing a workshop waste management supplier, make a [Quality Social and Environmental \(QSE\)](#) audit to make sure that the supplier (and its sub-contractors) handles the waste in the right way
- Track and monitor the waste produced by the organization's fleet. One solution is to track spare parts, oil, etc. used during maintenance and repairs and in this way assume those products have been disposed (e.g., the ICRC has modified its IT fleet management software (Fleetwave) to track the waste produce in each service/repair order. Also, it has developed a system to track in the software how much waste has be managed appropriated.
- In case your organisation runs its own in-house vehicle workshop, implement a waste manage procedure, including a [workshop waste kit](#) (tools and PPE) to make sure that waste is properly managed during the segregation, storage and transport of the waste as well as that your staff is properly protected. If this service is hired via a 3rd party, ensure during your vendor assessment that a similar process is in place
- A list of opportunities to reduce workshop waste can be found below. For more information, please have a look to the [Workshop waste management standard operating procedure](#)

Waste Type	Hazard Level	Risks	Opportunity for Reduction	Storage	Disposal	Tracked
Engine oil	HIGH	<ul style="list-style-type: none"> Leakage or spillage of waste oil during handling or storage. Inappropriate re-use of waste oil (e.g. anti-termite treatment). Fire 	<ul style="list-style-type: none"> Use of synthetic oils in the place of mineral oils Extending service/oil replacement intervals (subject to approval by RVFM) Operating vehicles with smaller engine sizes Replacing ICE vehicles with EVs 	<ul style="list-style-type: none"> Specialist container with spillage capture Different types of engine oil must not be mixed 	<ul style="list-style-type: none"> Recycle with specialist service provider 	YES
Oil filters	HIGH	<ul style="list-style-type: none"> Leakage or spillage of waste oil during handling or storage. 	<ul style="list-style-type: none"> Use of synthetic oils in the place of mineral oils Extending service/oil replacement intervals (subject to approval by RVFM) Operating vehicles with smaller engine sizes Replacing ICE vehicles with EVs 	<ul style="list-style-type: none"> Storage with spillage/leakage capture 	<ul style="list-style-type: none"> Puncture & hot-drain the filter for up to 12 hours. Separating Metal waste can be disposed with other metals 	YES
Batteries	HIGH	<ul style="list-style-type: none"> Damaged batteries may leak. Highly toxic, contains carcinogens, heavy-metals, and other potentially harmful by-products. Highly corrosive Polluting Very reactive 	<ul style="list-style-type: none"> Use long-life, sealed batteries wherever possible. Avoid allowing batteries to lose charge completely. Recharge stock batteries periodically (at 2–3-month interval) Install a fixed roof mounted solar powered battery charger Reduce unnecessary drainage of batteries Train drivers on techniques to prolong battery life 	<ul style="list-style-type: none"> Batteries should be stored upright under cover to keep them dry. Stacking needs to be separated with cardboard to prevent terminals from puncturing adjacent units. Cracked or leaking batteries needs to be placed in acid-proof containers with neutralizers. They should be stored in impervious surfaces and not on bare ground 	<ul style="list-style-type: none"> Recycle with specialist service provider 	YES

Waste Type	Hazard Level	Risks	Opportunity for Reduction	Storage	Disposal	Tracked
Tyres	HIGH	<ul style="list-style-type: none"> Tyres can cause significant fire hazards. Tyre stacks can be breeding sites for mosquitos and vermin and increase disease transmission. 	<ul style="list-style-type: none"> Driver awareness training on maintaining correct tyre pressures Regrooving of tyre where possible (larger tyres only) Ensuring tyres are not replaced when there remains useable depth of tread. 	<ul style="list-style-type: none"> Storage area should be away from buildings and other equipment, fire extinguishing equipment should close at hand. Storage should be covered to prevent capture of rainwater in tyres When storing tyres onsite, ensure that they are stacked in a manner to prevent vermin from breeding. 	<ul style="list-style-type: none"> Recycle with specialist service provider 	YES
Fluids & lubricants	HIGH	<ul style="list-style-type: none"> Chlorinated compounds and other potentially harmful by-products. Polluting Corrosive 	<ul style="list-style-type: none"> Use environmentally friendly, biodegradable fluids Extending coolant life Operating smaller vehicles Replacing ICE vehicles with EVs 	<ul style="list-style-type: none"> Store separately, do not mix 	<ul style="list-style-type: none"> Recycle with specialist service provider 	NO
Air conditioning & refrigerant gases	HIGH	<ul style="list-style-type: none"> HFCs, HCFCs and CFCs must not be discharged into the atmosphere, they can damage the ozone layer and impact the climate. 	<ul style="list-style-type: none"> Limited 	<ul style="list-style-type: none"> Captured and stored in specialist AC gas recovery cylinders. 	<ul style="list-style-type: none"> Return specialist refrigeration service provider 	NO
Empty containers	MEDIUM	<ul style="list-style-type: none"> Residual contaminants in containers 	<ul style="list-style-type: none"> Limited 			NO
General waste	LOW	<ul style="list-style-type: none"> Fire Vermin infestation 	<ul style="list-style-type: none"> Day to day low-hazard waste generated during workshop activity 	<ul style="list-style-type: none"> Waste types must be stored in separate containers 	<ul style="list-style-type: none"> General and/or specialist waste collection and recycling 	NO
Cardboard & paper						NO
Metal						NO
Plastics						NO
Glass						NO



Procurement

- Request information from suppliers on carbon emissions and life cycle impacts of products to enable more informed decision when selecting bids in tenders
- Consider Total Cost of Ownership when doing a purchase, which includes not only the initial price, but also the additional costs such as packing and shipping to the final destination, operating and maintenance cost, costs over the lifetime, timeliness and reliability of the delivery (e.g., [Mechanical instead of electrical treadmill.docx \(sharepoint.com\)](#))
- Include sustainability criteria for a more responsible procurement of services and products (i.e., product specifications)
- Opt for locally produced items when these meet the minimum quality, social and environmental standards set by your organization
- Buy in bulk to reduce packaging
- Buy reusable items rather than disposable ones:
 - [Reusing old seedling trays](#) for regular seed distributions
- Optimize the packaging or use environmentally friendly alternatives:
 - Opt for [transparent packaging with reduced graphics](#) or natural ink used for the compulsory information
- Choose more durable products to ensure long life span and minimize the need for replacement (e.g., [geodesic family tent](#))
- Consider the reparability of a product which will allow a second life and possibility to be reused. Opt for used, repaired or refurbished items, if possible, along with choosing repairable products
- Prioritize and enable long-term agreements with suppliers that have a robust carbon reduction plan in place
- The choice of material plays a major role regarding the carbon and environmental impact of a product, for example, using alternative materials with a lower environmental footprint or recycled material
- While reviewing product specification toward a more sustainable procurement of relief items, the option of including recycled plastics is indeed considered
 - When considering recycled plastic several issues can be faced:
 - Availability on the long term of the recycled plastic and at a constant quality
 - Confusion between post-consumer waste recycled plastic and industrial waste direct recycling
 - Impact of the inclusion of recycled plastic on the final quality and durability of the products
 - Social aspect (i.e. labour conditions, etc.) in the whole recycling industry
 - To mitigate those risks, different actions should be put in place:
 - The inclusion of recycled plastic should remain optional for the supplier to offer a product with/without recycled plastic.
 - The specification should include test on product durability Conduct a Life Cycle Analysis (LCA) to measure the environmental impact of using recycled materials, i.e. compare the LCA of a version with virgin plastic vs. the LCA of adding recycled plastic

- To reduce the cost of auditing/assessing suppliers and reach a wide supplier base with limited resources, collaborate with other humanitarian organizations by sharing information about suppliers' sustainability performance
- Consider environmental impact when choosing program implementation modality: in kind, vouchers or cash
 - Promoting [plastic free e-vouchers](#)
- Explore alternative humanitarian program designs to meet the needs of affected populations while reducing the carbon footprint and other environmental impacts (e.g., waste management livelihood programs; sustainable agriculture livelihood programs)
 - [Using solar pumping system for irrigation](#)
- Via your corporate supplier management and collaboration strategy, work together with your strategic suppliers and producers and invest in projects to decrease their carbon emissions, what will impact in your overall supply chain footprint
- Put in place measures for sustainability high-risk products such as palm oil, soy, beef, sugar in the case of food items
- Identify options for alternative items with a lower environmental impact in the use of distributed products (e.g., switching to improved clean cooking stoves)
- Reduce the use of plastic in all programs (packaging and products)
 - [Reducing single-use plastic in relief items](#)
 - [Replacing single-use plastic with cardboard for NFI kit distribution in Afghanistan](#)
- WHO states that 40-70% of medical equipment donated in low-middle countries was inoperable due to different reasons. The video [Minimizing medical equipment waste](#) focuses on the mitigation actions
- Define a corporate [Sustainable procurement guidelines](#) to inform procurement staff in the field on how to perform sustainable procurement
- Get inspired by this [repository of best practices from ICRC that](#) gets updates continuously.